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(12) EUROPEAN PATENT APPLICATION

(21) Application number: 88301961.4

(22) Date of filing: 07.03.88

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(71) Applicant: OMCO CO. LTD.
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(74) Representative: Westwood, Edgar Bruce et al
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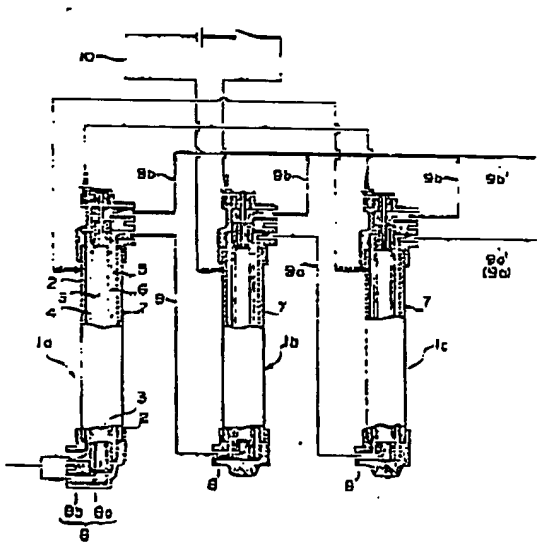
London WC2A 1HZ (GB)

(54) Water electrolyzing apparatus.

(57) An electrolytically ionized water forming apparatus includes a plurality of electrolysis devices (1a - 1c) each comprising an electrolysis vessel (7) having a cathode (2) and an anode (3) opposed to each other and an electrolysis diaphragm (4) partitioning the space between the electrodes into a cathode chamber and an anode chamber. A water supply channel (8) is disposed on one side of the vessel (7) and an ionized alkaline water discharge channel (9a) in communication with the cathode chamber and an acidic water discharge channel (9b) in communication with the cathode chamber respectively are disposed on the other side of each vessel (7). The plurality of electrolysis devices (1a - 1c) are connected in series in a plurality of stages such that only one of the two ionized water discharge channels (9a, 9b) of the electrolysis device of a preceding stage is connected to the water supply channel (8) of the electrolysis device of the succeeding stage. The polarity of the voltage applied to the electrolysis devices is preferably switched alternately at a predetermined time for enabling continuous operation. A magnetic supply unit or electron generation unit may be associated with the electrolysis vessels (7) thereby exerting magnetic effect or electrons on the water during electrolysis.

FIG. 1



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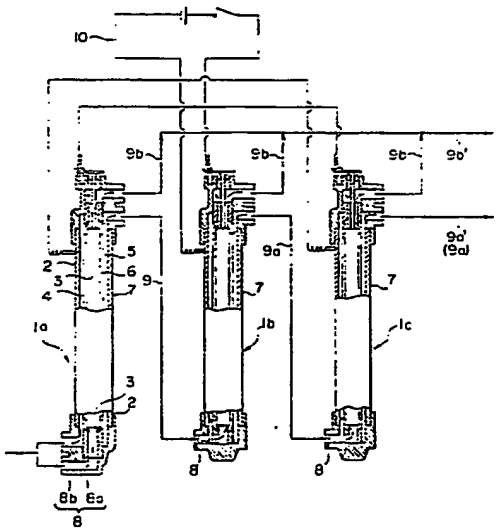

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EUROPEAN SEARCH REPORT

Application number

EP 88 30 1961

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where approonate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	US-A-2 794 776 (BRIGGS) * Column 5, lines 45-75; column 7, lines 20-25; column 18, lines 71-75; column 19, lines 49-57; figures 1,2 *	1,2	C 02 F 1/46
Y	--	3	
Y	NL-A-67 05 824 (CONSTRUCTORS JOHN BROWN) * Figure 6, ref. 6' *	3	
	--		
A	FR-A-2 232 519 (SACHS) * Claims 1-3 *	1	
	--		
A	GB-A-1 184 580 (KENJIRO YANAGASE) * Column 3, lines 8-61; figure 1 *	1-3	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
	--		C 02 F C 25 B
A	PATENT ABSTRACTS OF JAPAN, vol. 10, no. 350 (C-387)(2406), November 26, 1986 & JP-A-61 149 289 (TATSUO OKAZAKI) 07-07-1986 * Whole abstract *	1	
	--		
A	PATENT ABSTRACTS OF JAPAN, vol. 8, no. 279 (C-257)(1716), December 20, 1984 & JP-A-59 147 692 (TATSUO OKAZAKI) 24-08-1984 * Whole abstract *	1	
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Place of search	Date of completion of the search	Examiner
The Hague	01-07-1988	KASPERS

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.

☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,

namely claims:

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,
namely:

1. Claims 1-4
2. Claim 5
3. Claim 6
4. Claim 7
5. Claim 8
6. Claim 9
7. Claim 10

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,

namely claims:

☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,

namely claims: 1-4

European Patent Office

EUROPEAN SEARCH REPORT

Application number

EP 88 30 1961

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	US-A-1 840 105 (KEAN) * Figures * ---	1-3	

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

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